

**Notice of Allowability**

Application No.

10/672,609

Examiner

Edward R. Cosimano

Applicant(s)

BOHAN, PATRICK T.

Art Unit

2863

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 28 August 2007.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

1. The Oath/Declaration filed on 26 September 2003 and the Abstract as filed on 26 September 2003 are acceptable to the examiner.
2. Figures 1, 2, 3, 4A, 4B, 4C, 4D & 5 of the set of drawings containing 8 sheets of 8 figures as presented in the set of drawings filed on 26 September 2003 are acceptable to the examiner.
3. The following is a statement of reasons for the indication of allowable subject matter:

A) the prior art, for example:

(1) Reich et al (3,156,899) discloses a machine/process that provides the useful and beneficial function of recognizing in 1964 that there is a sampled data error between an analog input signal and the samples of digital data representing the analog input signal.

(2) either Baumgartner et al (6,074,426 or 6,553,514) discloses a machine/process that provides the useful and beneficial function of testing a design under test (DUT) by using a model of the DUT in order to generate and evaluate a test sequence that will consider all of the possible sequences of transitions of the DUT in order to properly test the DUT.

(3) either Cherubal et al (6,476,741 or 2002/0030615) disclose a machine/process that provides the useful and beneficial function of compensating for the non-linear operation of an analog to digital converter (ADC) where the non-linear error in the operation of an ADC at each transition between the output codes of the ADC is the result of both "integral non-linearity" (INL) errors and "differential non-linearity" (DNL) errors between the actual value of the analog signal being converted by the ADC and the corresponding digital code for each of the digital samples of the analog signal that is produced by the ADC by determining the INL error values and DNL error values for an ADC in order to generate the mathematical model of the operation of the ADC that will be used in order to provide the compensation/calibration characteristics for the ADC. Further the calibration/compensation model of the ADC may be used to train and test ADCs.

B) however, the prior art does not fairly teach or suggest in regard to claims 1, 8 & 15 a machine in claims 1 & 15 and a process in claim 8 that provides the useful and beneficial function of a diagnostic compiler that generate transition codes in order to indicate at least one characteristic of a multi-stage pipeline analog to digital converter (ADC) by providing structures in claims 1 & 15 and actions in claim 8 that perform at least the functions of:

(1) using a mathematical model of the stages and the number of bits in each stage in the ADC in order to generate transition locations for code sequences that correspond to the stages of the ADC; and

(2) using a characteristic indicator to use the generated transition locations in order to generate at least one characteristic of the multi-stage pipeline ADC.

Claims 2-7, which depend from claim 1, claims 9-14, which depend from claim 8, and claims 16-21, which depend from claim 15, are allowable for the same reason.

4. Response to applicant's arguments.

4.1 The objections and rejection that have not been repeated here in have been over come by applicant's last response.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward R. Cosimano whose telephone number is 571-272-0571. The examiner can normally be reached on 571-272-0571 from 7:30am to 4:00pm (Eastern time).

5.1 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow, can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/672,609  
Art Unit: 2863

Page 4

5.2 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ERC  
11/02/2007

  
**Edward Cosimano**  
**Primary Examiner**